BITS

computing & communications news

Los Alamos National Laboratory

Supercomputing and the Human Endeavor Conference

Washington D.C.

June 13-15, 2001

sponsored by

Los Alamos National Laboratory

Woodrow Wilson International Center for Scholars

January 2001

The Communications Operations Building is the new home for about 70 Computing, Communications, and Networking (CCN) Division employees. Employees from Telecommunications (CCN-4) and Network Engineering (CCN-5) began moving into the building in mid December. The 24,000 square-foot building is located east of Diamond Drive at the intersection of Eniwetok and Diamond Drive in Technical Area 3 near an existing telecommunications dispatch facility. In the top right photo Orlando Gurule with Johnson Controls Northern New Mexico, Victor Valenzuela of CCN-4 (bottom right photo, left), and Bruce Craven of Desktop Support (CCN-2) prepare to occupy the building.

Photos by Nick Nagy and LeRoy Sanchez

About the front cover: For more information about Supercomputing and the Human Endeavor: A multidisciplinary conference, see this website http://www.lanl.gov/sche.

Produced by the Information Management (IM) Division
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Supercomputing and Creative Research

by Denise Sessions, BITS Managing Editor, Communication Arts & Services, IM-1

Associate Laboratory Director for Nuclear Weapons Stephen Younger recently spoke at Los Alamos about three major revolutions he predicts the world is about to undergo: scientific revolutions in biological sciences and super-computing, and social and ethical revolution associated with the two scientific revolutions.

Younger discussed the scientific, social, and ethical considerations associated with supercomputing, by asking the question, "What are the great problems we can help solve?" For example, with the coming advances in supercomputing and biological science, we can address great intellectual questions related to understanding the processes of life and processes of the brain. We will be able to simulate extraordinary complex phenomena. Supercomputing is driving the future knowledge economy thereby influencing how we deal with the information revolution.

Supercomputing—More than a Grand Challenge, A True Revolution

Younger predicts that these revolutions are as profound as those revolutions started by Bacon and Galileo's discoveries, as far-reaching as the industrial revolution, and as pervasive as the spread of technology. From his white paper *Supercomputing and the Human Endeavor: The Coming Revolution in How We Use Machines to Help Us Think*,[1] Younger describes the dramatic nature of these changes.

Grand challenges are calculations that we know we could do if we had a computer of sufficient speed and with sufficient memory; for example, making sense of complex observations from telescopes and particle accelerators. In contrast, the calculation of a living object or the modeling of a sophisticated brain have profound social and ethical considerations.

Until recently, Younger said in his talk at the Laboratory, we have been interacting with computers on their terms, now we are changing the way we interact with computers. With the increase in power in supercomputing, we will be able to interact with computers in a more human way using voice, vision, and touch. Supercomputers will actually enable us to cross a threshold in how we interact with machines and what we use machines for.

Supercomputers will help us think about ourselves and the world around us. In the past we have not thought about using a computer to calculate a living object or model a sophisticated brain. With computers taking on the role of simulators of reality (in addition to performing numerical calculations) we will be able to address questions about the most basic issues of humanity, such as brain function.

A Rich Field for Creative Research

Every revolution brings unique challenges and choices. Younger encouraged the Laboratory audience to think of this as a time rich in opportunities in creative research. This research requires a blend of physics, computational methods, and computer science. For example, supercomputing is beginning to link physics and biology. A lot will be learned using concurrent simulation; that is, performing simulations while an experiment is in progress. As the scientific revolutions proceed, they will stimulate the revolution in society. Younger speculates that all three revolutions have the exciting prospect of uniting the world in ways we have never thought about.

Time to Begin Serious Dialog

In conjunction with the Woodrow Wilson Center for Scholars, Los Alamos National Laboratory is hosting a Supercomputing and the Human Endeavor conference in June 2001 and related preconference workshops in February 2001 in Washington, DC. Both the conference and the workshops will be limited and by invitation only. The conference goal is to provide a forum for leading thinkers from multiple disciplines from around the world to discuss the scientific, ethical, and economic consequences of the coming scientific revolution in supercomputing.

The conference in June will bring together from developed and developing nations the scientific community as well as historians, religious thinkers, philosophers, economists, sociologists, and politicians. For more information about the event, see the conference Web site: http://www.lanl.gov/sche/.

[1] See http://www.lanl.gov/sche/background.shtml.

Supercomputing Challenge Held Kickoff Conference

by Eric Ovaska, Customer Service Group, IM-2

The New Mexico High School Supercomputing Challenge is an academic-year-long event in which high school students create computational science projects. The "Challenge" extends into summer as well when Challenge sponsors train high school teachers in computational science so they can better assist the students. These pictures are from the Kickoff Conference that begins the Challenge year. The Kickoff Conference is where students learn skills (programming, unix, html, etc.) to help in their projects. This year the Kickoff Conference was from October 29-31 at the Glorieta Conference Center in Glorieta, NM.

Because this is a year-long outreach program, all events occur around the same date year after year. Our timeline is at: http://www.challenge.nm.org/dates.shtml. This year we have about 260 students participating from around the state of New Mexico. A map of where they come from can be found off of our home page (www.challenge.nm.org).

General inquires can be sent to consult@challenge.nm.org. Contacts at the Lab are Eric Ovaska (ovaska@lanl.gov, 667-1019) and David Kratzer (dhk@lanl.gov, 665-4444).

Supercomputing Challenge coordinators Betsy Frederick (on the left) from New Mexico Technet (a major sponsor of the program) and David Kratzer (on the right) from LANL.

Supercomputing Challenge trainers from IM-2 (from the left) Nikki Gaedecke, Eric Ovaska, and Lisa Gardner.

Supercomputing Challenge participants engaged in activities while coached by Leslie Linke, IM-2 technical and advanced technical computer trainer.

Customer Service (IM-2) computer training team members at Glorietta (starting at the left) Lisa Gardner, Beverly Faulkner, and Nikki Gaedecke.

DROLS: Search DoD Technical Reports at Your Desktop

by Jack Carter, Research Library, STB-RL

Web-Enabled DROLS (WED) is a modernized version of the Defense RDT&E Online System (DROLS), maintained by DTIC (Defense Technical Information Center). It has officially replaced the Technical Reports and Research Summaries portion of the online unclassified DROLS.

This product provides full access to virtually all unclassified, unlimited (U2) and unclassified, limited distribution (UL) citations to technical reports in DTIC's Technical Reports Collection. It also includes unclassified citations to classified documents in DTIC's Technical Reports Collection. Newly accessioned full-text Technical Reports will be available soon.

The Research Summaries Collection provides work unit level technical and management data to ongoing Department of Defense research and technology. This collection is a database of descriptive summaries of DoD research that provides information to technical content, responsible individuals and organizations, principal investigators, and funding sources.

Access is free. Register at http://www.dtic.mil/dtic/web-drols-app.html. For LANL's DTIC user number and other registration information contact Jeane Strub at jstrub@lanl.gov or by phone at 7-5809.

Full-Text Standards Available via the Web

by Jeane Strub, Research Library, STB-RL

National standards and related information are now available online through a service funded by the Lab's Facilities and Waste Operations (FWO) Division, the Nuclear Weapons Material and Manufacturing Program Office (NW-MM), and the Research Library.

Anyone with a LANL IP address can access the standards through the "IHS Specs & Standards" page on the Research Library web site: http://lib-www.lanl.gov/infores/stand/stanihs.htm

Because LANL is limited to 2 simultaneous users, it is very important to formally logout using the **logout** button at the upper right corner of the screen.

The following codes, standards, and databases are included in our current subscription for full-text printing and downloading:

ANSI	DOD military specifications and standards
ASCE	IEEE
ASHRAE	ISA
ASME with B&PVC	NEMA
ASTM	SMACNA
DOD-adopted industry standards	UL

In addition to the online service, FWO Division and the Research Library will continue to maintain various hardcopy volumes of standards information. Information on these can be found at http://arania.lanl.gov:8080/fpub/engineering/html/National%20Codes_Stds_Pubs.html for FWO, and at http://lib-www.lanl.gov/libinfo/stanfaq.htm for the Research Library.

Questions and comments can be forwarded to Tobin Oruch of FWO-SEM (mailto:oruch@lanl.gov), Wilbur Bergquist of NW-M&M (mailto:wbergquist@lanl.gov), or the Research Library (mailto:library@lanl.gov). If your group is interested in partnering with the Research Library to make more standards available, please contact the library.

JSTOR for Back Issues of Electronic Journals

by Carol Hoover, Research Library, STB-RL

The LANL Research Library is now providing access to the JSTOR collection of electronic journals. JSTOR (which stands for Journal Storage) contains the digitized backfile of 124 core scholarly journals, many of which date from the 1800s. This includes such titles as American Mathematical Monthly (1894-1994), Mathematics of Computation (1943-1994), World Politics (1948-1995), and Science (1960-1994) among many others. Over 4 million pages are available.

JSTOR is an independent not-for-profit organization begun by a group of major research libraries and the Andrew W. Mellon Foundation. It was recognized that electronic journals offer benefits over print journals including ease of access, searchability, saving of physical space, and preservation. However most journals are only available in electronic format from their publishers for the most recent years, and no single library can afford to archive everything. A group of research libraries combined forces to create a shared, reliable archive of older issues of core scholarly journals. JSTOR now offers collections of journals for site license by libraries. The Research Library subscribes to the Arts & Sciences and General Science collections.

JSTOR can be found at http://www.jstor.org/jstor/. You can search the journals by author, title, words in the abstract or full-text, and limit your search by date. Links are currently available in MathSciNet and will soon be available through LANL databases such as SciSearch® at LANL, INSPEC® at LANL, and others. Links will also be available from the Ejournals web page. Additional years and titles are regularly added to the JSTOR collection.

LinkSeeker Integrates Electronic Resources

LinkSeeker

by Lou Pray, Research Library, STB-RL

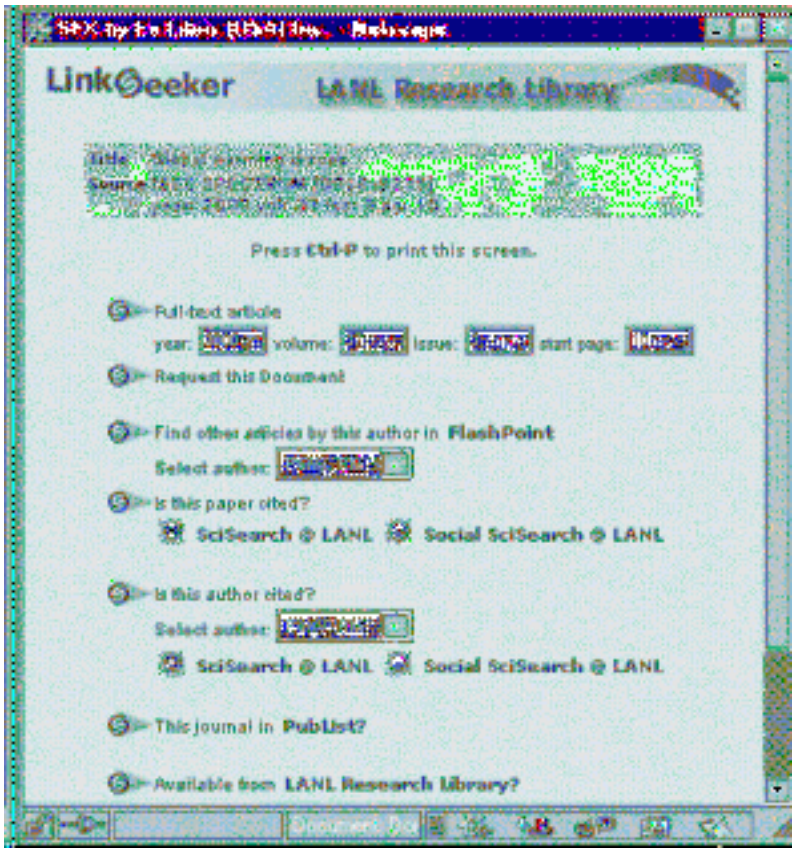
Do you search any of the LANL library databases? Navigation within these databases just got better thanks to a new library development product called LinkSeeker (http://lib-www.lanl.gov/lww/sfx1.htm).

LinkSeeker provides a reference-linking service among electronic resources. One of the Research Library's goals is to provide seamless integration from one resource to another. LinkSeeker allows users to click through from a citation in one database to the full text of an article in another or to be able to tell if this paper has been cited and by whom, plus many more options, including:

- Request the item
- Find other articles by this author
- Find other articles that cite this author
- Find out about the journal itself (publishing information)
- Find out if the library owns this publication
- Find the email of the author
- Ask a librarian for help locating more information

Simply follow the LinkSeeker "S" icon in Research Library databases for these extra services while searching.

Please send comments to cic14-linkseeker@lanl.gov.



LANL Web Team's Heroic Response to the Cerro Grande Information Burnout

by Elizabeth Katz, Communication Arts and Services, IM-1

As the months after the Cerro Grande fire unfold, the names of more and more heroes who helped Los Alamos cope with that tragedy continue to emerge. The flames that drove residents from their homes, displaced patients from hospital beds, and separated pets from their owners did not interfere with the clear thinking of one group, however. The LANL Web team and several other Lab and community collaborators were able to come together with a single goal: getting information out to a dispersed community bewildered by the trauma of relocation.

On an ordinary day, the LANL self-directed Web Core team follows its usual charge of building, managing, and maintaining the Laboratory Website. But on Wednesday, May 10, 2000, the team faced an unexpected test that was definitely not part of its usual business.

With the Lab closed and evacuees cut off from their home computers, it was clear that some communication network was needed. As LANL Web developer Chad Kieffer describes the crisis, "The Web team and other community Web experts came together quickly and established a communications network by using cell phones, an e-mail list, and lots of leg work. The team came together. Everyone carved out a role."

At a time when most people thought their world was falling apart, individuals like Lab contractor and Santa Fe business owner, Rick DeSaussure, were helping to reassemble some of the pieces. As early as Wednesday afternoon, Rick was asking what was happening with the Lab's and Ken Feller's Virtual Los Alamos Web servers. According to LANL Communications Specialist, Jim Cruz, "Ken Feller was actually the first to create a fire-info Website. Our own LANL fire-info site was created using his files. He had already been collecting contact and fire updates. We were going to use his server, but it kept crashing with the power fluctuations in town.

Jim Cruz continues, "On Wednesday afternoon, Rick and I were driving to Nambe to deliver a keg of beer to a bunch of displaced families. In fact, Ken Feller was one of those displaced persons. We partnered with him when we arrived, planned our strategy, and set to produce pages for Ken's Losalamos.com site, when the power went out and Ken's server went down."

This communications breakdown caused problems for the Los Alamos radio station, KRSN, that had been using Ken's resources as it struggled to gather information for the community after evacuation of the townsite. The displaced station, which first set up shop in White Rock and finally in Santa Fe, was an information lifeline for the evacuees.

At this point, the LANL IM-1 Web team leader, Katherine Norskog, suggested that the LANL site be used. So, even though the Virtual Los Alamos server was out of commission, the Lab Web server was intact, and the team was able to work with representatives from LANL's Office of Public Affairs at the Emergency Operations Office set up at a Santa Fe Fire Department facility on Siler Road. Forgetting about their own fire-related concerns team members, Susan Buchroeder, Jim Cruz, Mary Lou Holmes, Chad Kieffer, Elise Lee, Chris Lindberg, Katherine Norskog, Ann Peterson, and Sue Watters gathered as much information as they could, set up an e-mail chain, and went to work putting together a Website. The Laboratory's Public Affairs people were instrumental in providing the information flow to the Web team.

As Jim Cruz explains, "Rick DeSaussure volunteered the use of his equipment, staff, and time to the effort. His office was initially the 'war room' for the fire-info website. Once the Web team was up and running, both Rick and I devoted our time to supporting the ER Project, which was scrambling to provide fire maps to the firefighters and the communications center. We brought in equipment and even purchased a color plotter to print the maps."

By Thursday afternoon, New Mexico Internet professionals had created an evacuee registration database (nmgrande.com) that provided information on the whereabouts of displaced Los Alamos residents. Chad Kieffer credits former Lab employee Jim Hall with using the resources of his company, Oso Technologies, to help create the database. Individuals from another local company, Lobo Direct, along with individuals at the Santa Fe Institute, also helped with the evacuee registration effort. These private companies plus the skill of the Web team contributed to the growing inventory of information that helped people scattered throughout the area locate their friends and neighbors.

As Katherine Norskog remembers, "During this emergency shutdown, a team in the then CIC-1 and CIC-5 was able to establish contact with Public Affairs, Emergency Operations, and the LANL leaders and managers. By Thursday, May 11th after being offline for a day, the team members were able to resume publishing fire updates and organization information to the LANL Web remotely. Content was posted around-the-clock for the duration of the emergency shutdown, and the site became a major resource for the dissemination of information to Laboratory employees."

To set this activity in perspective, during a 'normal' workweek, http://www.lanl.gov averages ~110,000—120,000 hits per day from Monday through Thursday, and ~75,000—85,000 hits on Friday (due to the new A/B schedule). During the second week of the emergency shutdown, the site averaged 140,000 hits.

When asked what facets of these Web team efforts were the most astounding under these trying conditions, Jim Cruz answers, " I don't think of the effort as astounding. This is something that we do all the time. In fact, it is a type of effort that many in the Lab community are familiar with. Collaboration on a grass-roots level is commonplace. If there is anything astounding, it would be that none of those involved missed a heart beat in the acknowledgement of their roles and responsibilities for the Lab mission. The team was experienced in the technology and very used to working with each other. The correct term is 'self-directed,' but we did it without approval and on our own initiative. We just knew what needed to be done. It was a demonstration of communication as a 'core competency.'"

For those evacuees trying to make a shelter or hotel room feel like home, however, the LANL Web team provided something much less bureaucratic—a chance to connect with others who had fled the flames and an opportunity to benefit from the power of information technology at a time of great personal tragedy.

What Happened to CIC-6?

by Vicki Brown, Customer Service, IM-2

With the reorganization of CIC Division on October 1, 2000, employees of CIC-6, Customer Service were reassigned to several groups.

Where did the each of the CIC-6 teams go?

- The ICN Consultants have moved to CCN-7, HPC Systems.
- The Desktop Consultants have moved to CCN-2, Desktop Computing.
- The Password Office moved to CCN-5, Network Engineering.
- The EIA Consultants and the Training Team are now a group in Information Management (IM) Division, IM-2, Customer Service.

Even though we are no longer in one group, we still work together as one service center in the same location. You can still call one number, 5-4444, to receive answers to your computing questions.

All of the team members continue to meet on a monthly basis to keep up with the latest news and issues. The team leaders for each team meet every other week to resolve issues and share ideas.

CCN-4 Offers Dial-In, H.320 Videoconferencing Service

by Karl Pommer, Telecommunications Group, CCN-4

The CCN-4 (formerly, CIC-4) Telecommunications group began production of a new conference bridge service for H.320 (ISDN-based) videoconferencing endpoints effective October 16, 2000. The MCU (multiport conference unit) can be used to connect compatible endpoint locations throughout the world into a single conference. Interested parties are requested to call (505) 665-3000 to begin the certification process, which is required, before an on-site or off-site end point can be scheduled for the MCU. We have had good results with using H.320 Videoconferencing equipment from both PictureTel <www.picturetel.com> and Polycom <www.polycom.com>.

The MCU is offered as a dial-in, H.320 videoconferencing service. The cost of the MCU is included in the room charge if the videoconference takes place in one the Telecommunications group's videoconferencing rooms. Otherwise, the cost of setting up and running the conference will be recharged at an unburdened rate of $69/hour, based on time spent. However, once the equipment incompatibilities and scheduling problems have been addressed, as in the case of a scheduled periodic conference, the recurrent MCU charge should become negligible.

The MCU is equipped to support up to four H.320 endpoints running at 384 Kbps or up to twelve endpoints running at 128 Kbps. Please contact us regarding the potential for mixed speed conferences.

Except for prearranged and approved circumstances, only CCN-4 support personnel can be held responsible for the satisfactory operation of the MCU. Questionable port connections will be tested, upon request, using the group's videoconferencing endpoint equipment.

The MCU also includes an H.323 (Internet-based) capability, which is still being tested on an experimental basis. H.323 is a relatively new standard and variable performance levels have been observed in video and audio quality of desktop software applications like NetMeeting and CuSeeMe. Much better results have been observed from H.323 conference room equipment. Unlike H.320 systems, the audio and video can also become degraded as a result of traveling across the Internet due to bandwidth limitations and quality of service problems. On the plus side, the connection is free of long distance telephone charges. Comparable quality, approaching H.320-equipped endpoints, has been observed with connections to H.323 conference room systems located at other DOE sites served by the ESnet backbone. Further recommendations will be provided when H.323 becomes a production service.

Please note that both H.320- and H.323-equipped videoconferencing endpoints are required to comply with the requirement outlined on the Computer and Technical Security (S-5) group's Webpage http://int.lanl.gov/orgs/s/s5/vidconf.shtml.

Details relating to the use of the Telecommunications group's videoconferencing rooms are defined on the Web at http://int.lanl.gov/orgs/cic/ccn4/. This service is provided from 7:00 a.m. to 6:00 p.m. (Mountain) weekdays using an unburdened, recharge rate of $340/hour at the locations below. Please contact Dolores Roybal, Elevina Salazar, or Daris Millegan at (505) 665-3000 or 667-7829 or send e-mail to vtc@lanl.gov for further information.

Three Video Teleconference Centers at the Laboratory

Main Video Teleconferencing Center (VTC)

Location: TA-3, SM-132, Room 33

Size: Seats 12

Secure facility for classified and unclassified conferences

Telecommunications Office Building

Location: TA-60, SM-175, Room 104

Size: Seats 14

Unclassified conferences

Laboratory Data Communications Center (LDCC)

Location: TA-3, SM-1498, Room 116 Videoconferencing Room

Size: Seats 6

Unclassified conferences in a secure area

High-Performance Computing Workshops for the 30-Tops Computer

by Hal G. Marshall, http://public.lanl.gov/marshall/, ICN Consulting Team, High Performance Computing Systems, CCN-7, and Frank Pietryka, Compaq

The ASCI 30T Integration Project Team is sponsoring high-performance computer training in preparation for the ASCI Q machine. Three classes are currently planned, but another class may be added if these classes fill, thus, registration is required.

The first class is for users new to the Compaq SC and GS machines with some prior knowledge of high-performance computing and familiarity with UNIX. This class is a 2-day "hands on" workshop.

Title: Programming the Compaq AlphaServer SC and GS Computers (course # 21420)

Date: Monday–Tuesday, March 12–13, 2001, 8:30 a.m.–5:00 p.m.

Location: SM-200 Classroom (TA-3, SM-200, Room 115—an open area)

Description: An intensive overview of the Compaq's high-performance technical computing environment is provided for technical users. An overview of the architecture with an eye on performance issues will also be discussed. The course will explain and demonstrate how to port, develop, and optimize applications for performance and exploit the power of AlphaServer systems. Topics and examples will include compiling MPI message-passing codes, executing those codes with batch and cluster-management software, debugging those codes with the Etnus TotalView debugger and tuning those codes with the Pallas VAMPIR event-analyzer.

The second class covers more advanced material on optimization of the Compaq SC and GS machines. Students should have taken the above introductory course or have similar experience. Students may take this course in one of two formats. One format is a 1-day lecture and the other is a 2-day "hands-on" workshop" that will cover the same material. Note the registration process below is different for the two workshops and there is a small charge for the "hands-on" workshop.

Title: Performance Analysis and Optimization on Compaq AlphaServer Systems (course # 21421)

Date "Lecture Only" class: Wednesday, March 14, 9:00 a.m.–5:00 p.m.

Location "Lecture Only" class: The Forum, LDCC, 1st Floor

Date "Hands-On" workshop: Thursday–Friday, March 15–16, 8:30 a.m.–5:00 p.m.

Location "Hands-On" workshop: SM-200 Classroom (TA-3, SM-200, Room 115—an open area)

Description: This class will provide special topics on optimizing application programs for the Compaq AlphaServer SC series supercomputers. The class begins with a discussion of the architectural features of the GS320 nodes that affect the performance of application programs. Students learn the principles of optimizing message-passing programming based on MPI and shared-memory programming using OpenMP parallelization directives. However, the first step to good parallel performance is good serial performance. Students learn details of the EV 67 processor and the memory hierarchy. Techniques for making the code run efficiently on a single processor are presented. Performance analysis tool, DCPI, is presented. The final section addresses the issues of optimizing code for the parallel environment, including effective placement of data in memory for efficient access by the processors. Advance topics in MPI are also presented such as single-side communication and MPI I/O.

For the hands-on workshops, please register on-line at this URL: http://www.lanl.gov/labview/training/training.html.

Click on "Computer" (left hand column)

Click on "Advanced Technical Computer Training"

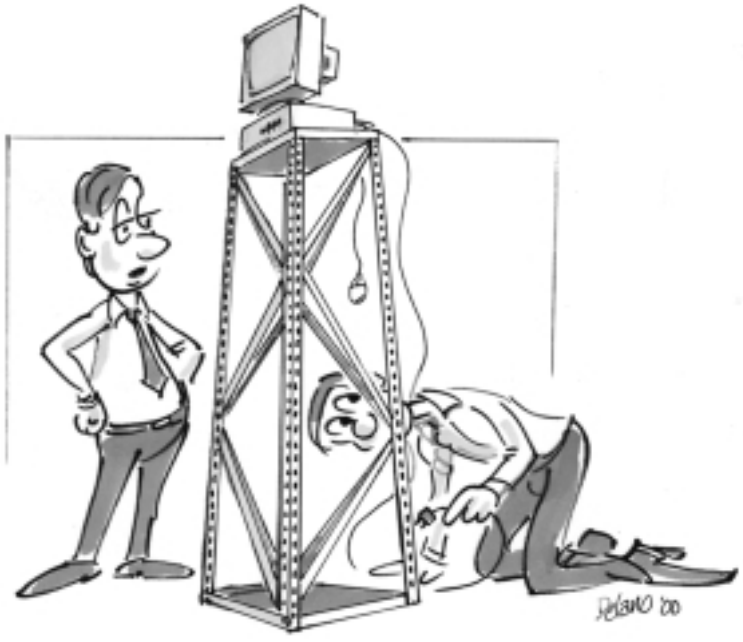
Scroll down and click on the course(s) you want to register for:

- Programming the Compaq AlphaServer SC and GS Computers (course # 21420)
- Performance Analysis and Optimization on Compaq AlphaServer Systems (course # 21421)

Clicking on the "NEXT" button will lead you through the registration process. You must register for each course separately. Please make sure you have your manager's approval before registering for a "hands-on" workshop. For the "lecture only" optimization class, register by sending e-mail to marshall@lanl.gov. The registration deadline is March 1, 2001.

For further information on these classes or other details on the ASCI Q machine, use this URL: http://www.lanl.gov/asciqtoday.

Suggestions on topics to be covered in the classes are welcomed and a chance to review the notes in advance is possible; e-mail marshall@lanl.gov. For consulting questions on the ASCI QID and Q machines, e-mail consult@lanl.gov.



"THIS IS OUR MOST 'HIGH-END' MAINFRAME"

CIC Division Reorganized into Three New Divisions

by Denise Sessions, BITS Managing Editor, Communication Arts & Services, IM-1

In October 2000 the over-1000-employee Computing, Information, and Communications (CIC) Division was reorganized into three new divisions at the Laboratory. The following paragraphs will give you an idea of the new organization for the functions of the old CIC.

Information Management Division (IM)

Groups

IM-1 (CIC-1) Communication Arts and Services

IM-2 (CIC-6) Customer Service

IM-4 (CIC-9) Imaging Services

IM-5 (CIC-10) Information and Records Management

IM-6 (CIC-13) Business Information Systems

IM-7 (CIC-15) Advanced Database Information Technology

Information Architecture (IA) Project

Knowledge Capture and Information Management (KCIM) Project

IM Profile

IM Division will provide information management services and technologies for its Laboratory customers. IM Division's responsibilities include

- writing/editing, design, illustration, and electronic publication services;
- general and technical computer training;
- enterprise systems call center;
- video, photography, and reprographics;
- information and records management;
- departmental system programming, database and server support;
- enterprise systems programming, database and server support;
- leadership of LANL IA Project; and
- KCIM endeavor for LANL-Nuclear Weapons.

Website: http://int.lanl.gov/orgs/im/

Computing, Communications, and Networking (CCN)

Groups

CCN-2 (CIC-2) Desktop Support

CCN-4 (CIC-4) Telecommunications

CCN-5 (CIC-5) Network Engineering

CCN-7 (CIC-7) High-Performance Computing Systems

CCN-8 (CIC-8) High-Performance Computing Environments

CCN-12 (CIC-12) Scientific Software Engineering

CCN-18 (CIC-18) Operations, Maintenance, and Support

Website: http://www.lanl.gov/orgs/cic/

CCN Profile

The CCN Division works to develop the most powerful scientific computing facility in the world. CCN has major responsibilities for developing and implementing the 30 teraOps system high-performance computing infrastructure including:

- Terascale strategic computing
- Petascale electronic storage
- Ultraresolution visualization
- Scientific software engineering
- Extremely high-performance networking
- High-performance computing environments
- Highly integrated desktop platforms, and
- The facilities and security infrastructure for these services.

Computer and Computational Sciences (CCS)

Groups

CCS-1 (ACL) Advanced Computing

CCS-2 (new group) Methods for Advanced Scientific Simulations

CCS-3 (CIC-3) Modeling, Algorithms, and Informatics

CCS-4 (X-6) Transport Methods

Website: http://www.ccs.lanl.gov/

CCS Profile

CCS Division will focus on research issues in computer and computational science associated with employing the largest, most computational resources ever assembled. CCS division will provide a broad scientific and technological foundation to address important national issues such as stockpile stewardship, energy and environment, bioscience, and crisis management.

The Division includes a multidisciplinary mix of capabilities focused on the following strategic thrust areas:

- Advanced computing
- Methods for advanced scientific simulation
- Modeling, algorithms, and informatics
- Transport methods

Resources will include an open research network, advanced Linux clusters, and network and visualization testbeds.

Bob Newell, Acting Division Director for Information Management (IM) Division, enjoying the first IM Division Christmas potluck luncheon in December 2000.

From the September 27th CIC reception: (from the left) Hans Ruppel, Debby Thompson, and Charlie Slocomb.

In December 2000, Information Management (IM) Division held its first Christmas potluck. Bob Newell, Acting Division Director, celebrated the preholiday event with IM employees.

Debby Thompson receives from Charlie Slocomb a plaque of appreciation from CIC Division.

Charlie Slocomb presents Debby Thompson with a plaque of appreciation. The artwork was created by Donald Montoya, Communication Arts and Services.

Debby Thompson opens a gift of appreciation from CIC Division as Charlie Slocomb looks on.

John Morrison, Acting Computing, Networking, and Communications (CCN) Division Director presents an artist's concept of a gift to be created for Charlie Slocomb from CIC Division.

Charlie Slocomb, former CIC Division Director, chats with CIC Division employees during the September 27th reception.

(From the left) Debby, Hans, and Charlie visiting with CIC Division employees.

Hans Ruppel presents to Charlie Slocomb a plaque of appreciation from CIC Division. Donald Montoya from Communication Arts and Services created the artwork.

(From the left) Hans Ruppel, John Morrison, and Charlie Slocomb celebrate the moment.

Badge Photos Now Available Through Data Warehouse

By Betty Katz, Communication Arts & Services, IM-1, with Ken Collins, Badge Office, Information and Personnel Security, S-6

The next time you're asked to supply a recent photo of yourself for an organizational chart, a journal article, or a report, you'll be able to access your badge photo through the Laboratory's Data Warehouse. This availability is just one of the fruits of tying the badging system into the Laboratory's corporate database, the Enterprise Information Applications (EIA). With the implementation of the new badging system in September 1999, all badging data, including portrait images, now reside in the Laboratory's EIA environment.

The Badge Portraits report, which is only available through the Web-based Data Warehouse interface, is listed under Badge Office Information in the Personnel component of the Web-based Data Warehouse. Another useful report, Badge History, tracks the record of all badges issued to you.

All those with an active Employee Information System (EIS) record, including Laboratory workers as well as visitors and uncleared foreign nationals, will be able to use this capability for official (work-related) purposes if the appropriate authority has been assigned. In this case, the authority DWALL is the appropriate authority. (See the sidebar on this page for specific information on DWALL authority.)

While the latest portrait on file usually will be the one on your most recent badge, for technical reasons, that is not always the case. However, the purpose of making the images available is to offer the capability for using them for a variety of official (work-related) purposes. In other words, this portrait report is not intended to guarantee a match of the image retrieved with your current active badge.

Accessing Your Portrait

The images available through the Data Warehouse are in standard jpeg format. By right clicking on the image, you can save it to a drive or disk and then paste it into documents, send as an e-mail attachment, etc.

To access your badge portrait image, you will need to:

- use your own Laboratory workstation, dial-in to your Lab account from a non-Lab computer, or use a Lab workstation that is not your own;
- use your administrative-level token card that authorizes you to access your data; and
- have DWALL authority.

To run the Data Warehouse report:

1. Go to the Laboratory home page and pull down the **Select a Shortcut** window.
2. Select **Data Warehouse.**
3. At the Data Warehouse home page, click on **Select a Report.**
4. If you are not currently logged into the Data Warehouse, you will be prompted to use your Token Card and authenticate yourself by entering your Z number and then your password.
5. When the next page comes up, make sure the tab labeled **Personnel** is highlighted. If it is not highlighted, click on the **Personnel** tab at the top.
6. Go to the category labeled **Badge Office Information.**
7. Select **Badge Portraits.**
8. Fill in either your name or Z number (preferably the latter, but do not fill in both). Make sure to leave the other fields such as **Division Code** and **Organization Code** blank.
   - All letters that you enter must be UPPERCASE.
   - If you do not know how your full name appears (in the format LAST, FIRST, MI) and you wish to search on your name, enter part of your name followed by an asterisk (e.g., SMITH J*). If you do not do this, your search by name will be unsuccessful.
9. Click on the **Create Report** button.
10. Click on your image to view it.
11. Right click on your image to save it and name it as a file.

If you do not have your own token card, you can ask your group office to obtain your badge history for you. Group and division management can run this report for the entire group or division, using the organization or division code.

Reviewing Legal Considerations

Group managers have the system authority to access the badge portrait of all the members of their rosters and are also permitted to assign that authority to non-managers. However, there are **important legal restrictions** governing the use of these images.

Guidance for such access is based on the Laboratory's Legal Counsel's review of the appropriate use of these images, which are considered sensitive unclassified information. A careful and exhaustive review by the Office of Laboratory Counsel has determined that use of badge images by other than the owner must follow strict guidelines. This guidance appears directly on the query screen for this report. Information about the legal constraints and the text of the legal disclaimer, which managers are required to adhere to can also be found at: http://badge.lanl.gov/faqs/legalnotice.shtml.

While it is possible for managers to use the images of employees and other workers in their organizations for such purposes as organizational charts or Web posting, it may only be done by first contacting the Office of Laboratory Counsel and following its procedures for obtaining approval. (For further explanation, see the Legal Notice to Laboratory Managers from the Office of Laboratory Counsel in the sidebar on this page.)

In commenting on this new service, Badge Office Project Leader, Ken Collins notes, "Recent trends in data management are to give the customer direct access and control of his or her own information. Making a person's badge portrait available is consistent with this approach. We believe this is a feature that many people at the Lab will find genuinely useful and convenient."

DWALL Authority for the Badge Portrait and Badge History Reports

Two reports are now available through the Data Warehouse and data can be retrieved for a single individual, an organizational unit, or an entire division:

- a Badge Portraits report that permits access to the latest badge portrait on file; and
- a Badge History report that lists key badging data on all badges issued to the queried individual(s), whether a Laboratory worker or visitor.

An assigned authority called **DWALL** is required to view both reports. That is, an individual with an administrative-level token card can access his or her own record provided he or she has been given DWALL authority. **UC** employees have this authority automatically. **NonUC** Laboratory workers may request a UC line manager to submit a request to the IM-2 EIA Consultants Office (665-4444 / Option 2) to assign them DWALL authority. Alternatively, their group office should be able to access these reports on their behalf, since group managers (and above) or their designees have the necessary authority for anyone assigned to their group. DOE/LAAO, JCNNM, and PTLA managers may directly request DWALL authority for their employees. All other individuals with EIS Employee Type **EXT** can only obtain this authority if requested and justified by a sponsoring UC line manager.

Office of Laboratory Counsel

Important Legal Notice to Laboratory Managers

These badge images are part of a DOE system of records that is subject to the provisions of the Privacy Act of 1974. These images are also subject to the provisions of the California Information Practices Act. Your access and use of these images, and of this system option, must be consistent with Laboratory Policy (e.g., AM 701, etc), the Privacy Act, and the California Information Practices Act. If you have access to badge images of other individuals (other than your own personal badge image), your use of such images is limited to controlling access to classified information and areas. You may not use these images for any other purpose without prior consultation with and approval of the Office of Laboratory Counsel (contact Litigation and Employment Law, 667-3766).

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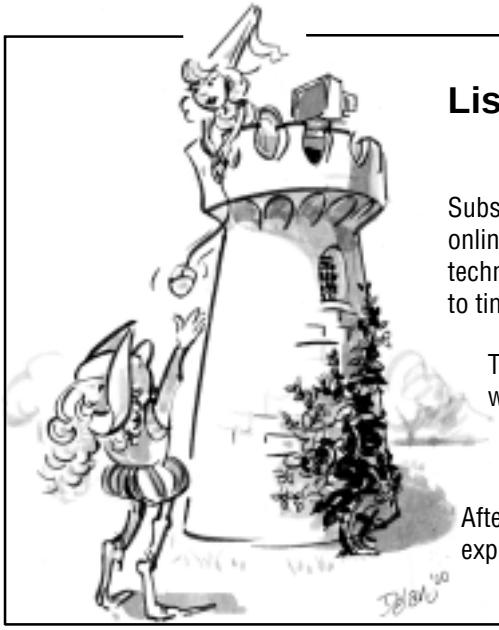

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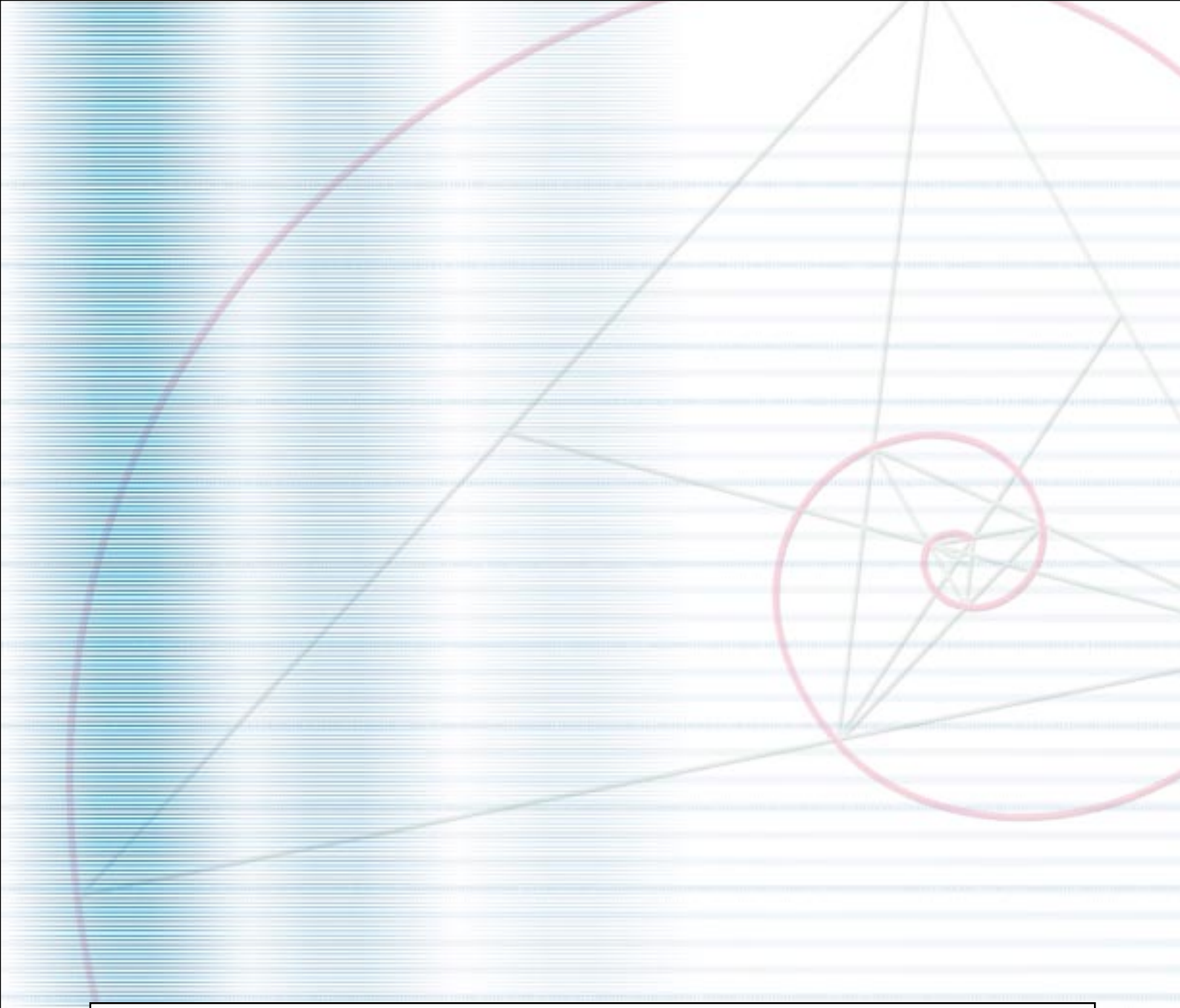

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